Section 1

MANE 3351

Subsection 1

Laboratory 3 Session

Classroom Management

Agenda

- Review Lab 1 Assignment
- Demonstrate Lab 1 Assignment
- Distributed materials needed for Lab One

Subsection 2

Resources

Handouts

- Labatory 3 Session Slides

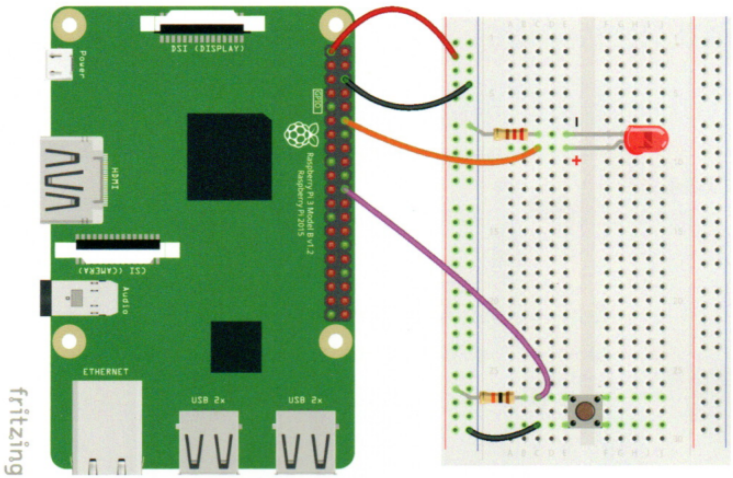
Assignments

- Collect materials needed for Laboratory Assignment One
- Complete Lab 1 before 9/11/2024 at 2:00 pm

Lab 1 Assignment Overview

Controlling the LED with a Button

This example builds upon the previous example by adding a push-button switch that will control the LED. Use an additional male-to-female jumper wire, a male-to-male jumper wire, and a 10K Ohm resistor (brown, black, orange) to connect the push-button switch to the GPIO port.




```
import RPi.GPIO as GPIO
import time

GPIO.setwarnings(False)
GPIO.setmode(GPIO.BCM)
GPIO.setup(18, GPIO.OUT)
GPIO.setup(25, GPIO.IN)

while True:
      if GPIO.input(25):
            GPIO.output(18, False)
      else:
```

Lab 1 Milestones

1. Construct circuit on breadboard
2. Connect breadboard circuit to Raspberry Pi
3. Create directory for Lab 1 on Raspberry Pi and cd to directory
4. Use Thonny to create Python file containing code
   - Add documentation to code
5. Run program and test system
6. Demonstrate working Lab 1 to Dr. Timmer before 9/11/2024 2:00 pm

Note: laboratory session will not meet 9/9. Dr. Timmer will be in his office during the regularly scheduled laboratory session and office hours. Please demonstrate your working system before the deadline.